

Piezoelectric MEMS Microphone Module

VM1000 MEMS Breakout **Ewellite Photonics**

Description

Ewellite Photonics has taken the VM1000 piezoelectric MEMS microphone and created a convenient breakout module. The VM1000 is a sensitive piezoelectric MEMS microphone produced by Vesper (https://vespermems.com/wp-content/uploads/2019/03/VM1000_Datasheet-2.pdf). It is capable of measuring acoustic vibrations over a large bandwidth in a wide range of environments. The Ewellite Photonics VM1000 MEMS module has a simple pinout with an analog output (A/O) for measuring acoustic waves. Additionally, the Ewellite Photonics VM1000 MEMS module is *Arduino and Raspberry Pi compatible*.



Features

- Low noise
- High dynamic range
- Damage resistant in harsh environmental conditions

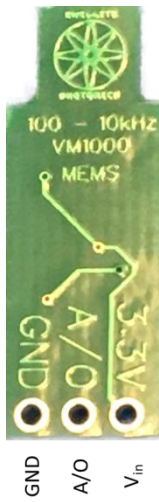
Electrical Characteristics (at 25° C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Storage Temp.	T _{st}	-55		155	°C	
Operating Temp	T _{ot}	-40		85	°C	
Soldering Temp.	T _{sol}			260	°C	Max 10 sec
Supply Voltage	V _{cc}	1.6	1.8	3.6	V	
Supply Current	I _o		165		µA	At V _{cc} < 3.6V
Signal-to-noise	SNR		62		dB(A)	Avg. 100Hz – 10kHz
Startup Time			200		µs	

Example Applications

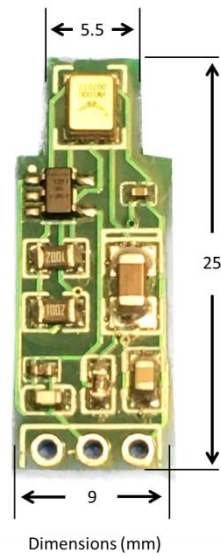
- Voice detection and recording
- Smart device microphone
- Outdoor sound monitoring
- Vibration monitoring devices
- Underwater vibration detection
- Wearable
- IoT devices

Board Pinout



Vin – Power pin for 1.6 – 3.6V input
GND – Common ground
A/O – Analog output

Board Measurements



Custom board sizes available by contacting ewellitephotonics@gmail.com

Caution: ESD can damage the device. Please use proper grounding protocols to avoid malfunctioning and potential damage to the device.